

## **VOLKSWAGEN AG**

EXECUTIVE ORDER U-R-033-0006 New Off-Road

Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engines and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2003	3VWXL01.9ADG	1.9	Diesel	8000
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION
	Indirect Diesel Inje	ction	Pump, Generator Set, Other I	ndustrial Equipment

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED	EMISSION			E	EXHAUST (g/kw-l			OF	ACITY (%	o)
POWER CLASS	STANDARD CATEGORY		нс	NOx	NMHC+NOx	co	PM	ACCEL	LUG	PEAK
37 ≤ KW < 75	Tier 1	STD	N/A	9.2	N/A	N/A	N/A	20	15	50
		CERT		5.3				5	7	8

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 4<sup>TH</sup> day of December 2002.

Aller Lyons, Chief

Mobile Source Operations Division

Attachment lof1

Engine category: Nonroad CI Manufacturer: Volkswagen

EPA Engine Family: 3VWXL01.9ADG

Mfr Family Name: ^ 3ADG

Process Code: New Submission

**Engine Model Summary Form** 

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2.Engine Model   3.BHP@RPM (SAE Gross)   Ministroke @ peak HP (for diesel only)   (Bshr)@ peak HP (Bshr)@ peak HP (for diesels only)   6.Torque @ RPM (SEA Gross)   ministroke@peak torque     1.9L   58@4000   33.8   29.8   90ft-lbs@2400   34.0     1.9L   50@3000   33.4   22.1   93ft-lbs@2400   33.2     33.4   22.1   93ft-lbs@2400   33.2									
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4. Fuel Rate: 5. Fuel Rate: 7.	EM T	17.3	33.2	93ft-lbs@2400	22.1	33.4	50@3000	1.9L	JG4
4.Fuel Rate: 5.Fuel Rate: 7.Fuel Rate: 7.Fuel Rate: 7.Fuel Rate: 7.Fuel Rate: 7.Fuel Rate: 2.Engine Model (SAE Gross) (for diesel only) (for diesels only) (SEA Gross) torque	#101 WB	17.9	34.0	90ft-lbs@2400	29.8	33.8	58@4000	1.9L	JG5
	9.Emission Control Device Per SAE J1930	8.Fuel Rate: (lbs/hr)@peak torque		6.Torque @ RPM (SEA Gross)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)		3.BHP@RPM (SAE Gross)	2.Engine Model	1.Engine Code